We claim:

1. A method of reducing the severity of a proliferative disorder, comprising administering to an individual having the proliferative disorder an effective amount of paricalcitol, wherein the paricalcitol reduces cellular proliferation, with the proviso that the proliferative disorder is not prostate cancer or head and neck squamous cell carcinoma.

2. The method of claim 1, wherein the proliferative disorder is cancer.

3. The method of claim 1, wherein the proliferative disorder is a myelodysplastic syndrome.

4. The method of claim 2, wherein the cancer is leukemia.

5. The method of claim 4, wherein the leukemia is acute myelocytic leukemia.

6. The method of claim 4, wherein the leukemia is acute lymphocytic leukemia.

7. The method of claim 2, wherein the cancer is multiple myeloma.

8. The method of claim 2, wherein the cancer is breast cancer or colon cancer.

9. A method of reducing the severity of a proliferative disorder, comprising administering to an individual having the proliferative disorder an effective amount of paricalcitol and an anti-cancer agent, wherein the combination of paricalcitol and the anti-cancer agent reduces cell proliferation, with the proviso that the proliferative disorder is not prostate cancer or head and neck squamous cell carcinoma.

10. The method of claim 9, wherein the proliferative disorder is cancer.

11. The method of claim 10, wherein the cancer is selected from leukemia, multiple myeloma, breast cancer and colon cancer.

12. The method of claim 9, wherein the proliferative disorder is a myelodysplastic syndrome.

13. The method of claim 9, wherein the anti-cancer agent is selected from daunomycin, arsenic trioxide, adriamycin, PS341, dexamethasone, taxol, 5-fluoroceracil and methotrexate.

14. The method of claim 13, wherein the anti-cancer agent is arsenic trioxide.

15. the method of claim 14, wherein the proliferative disorder is leukemia.

16. The method of claim 15, wherein the leukemia is acute myelocytic leukemia.

17. The method of claim 15, wherein the leukemia is acute lymphocytic leukemia.

18. The method of claim 13, wherein the anti-cancer agent is dexamethasone.

19. The method of claim 18, wherein the proliferative disorder is multiple myeloma.

20. The method of claim 13, wherein the anti-cancer agent is daunomycin.

21. The method of claim 20, wherein the proliferative disorder is myeloid leukemia.

22. The method of claim 13, wherein the anti-cancer agent is PS341.

23. The method of claim 22, wherein the proliferative disorder is myeloma.

24. The method of claim 13, wherein the anti-cancer agent is taxol.

25. The method of claim 24, wherein the proliferative disorder is prostate cancer.

26. The method of claim 24, wherein the proliferative disorder is breast cancer.

27. The method of claim 13, wherein the anti-cancer agent is adriamycin.

28. The method of claim 27, wherein the proliferative disorder is breast cancer.

29. The method of claim 13, wherein the anti-cancer agent is 5-fluoroceracil.

30. The method of claim 29, wherein the proliferative disorder is colon cancer.

31. The method of claim 13, wherein the anti-cancer agent is methotrexate.

32. The method of claim 31, wherein the proliferative disorder is colon cancer.

33. A method of reducing cancer recurrence, comprising administering to an individual in cancer remission an effective amount of paricalcitol, wherein the paricalcitol reduces cancer cell proliferation.

34. The method of claim 33, wherein the individual is in remission from leukemia.

35. The method of claim 34, wherein the leukemia is acute myelocytic leukemia.

36. The method of claim 34, wherein the leukemia is acute lymphocytic leukemia.

37. The method of claim 33, wherein the individual is in remission from multiple myeloma.

38. The method of claim 33, wherein the individual is in remission from breast cancer or colon cancer.

39. A method of reducing cancer recurrence, comprising administering to an individual in cancer remission an effective amount of paricalcitol and an anti-cancer agent, wherein the combination of paricalcitol and the anti-cancer agent reduces cancer cell proliferation.

40. The method of claim 39, wherein the individual is in remission from a cancer selected from leukemia, multiple myeloma, breast cancer and colon cancer.

41. The method of claim 39, wherein the anti-cancer agent is selected from daunomycin, arsenic trioxide, adriamycin, PS341, dexamethasone, taxol, 5-fluoroceracil and methotrexate.

42. The method of claim 41, wherein the anti-cancer agent is arsenic trioxide.

43. The method of claim 42, wherein the individual is in remission from leukemia.

44. The method of claim 43, wherein the leukemia is acute myelocytic leukemia.

45. The method of claim 43, wherein the leukemia is acute lymphocytic leukemia.

46. The method of claim 41, wherein the anti-cancer agent is dexamethasone.

47. The method of claim 46, wherein the individual is in remission from multiple myeloma.

48. The method of claim 41, wherein the anti-cancer agent is daunomycin.

49. The method of claim 48, wherein the individual is in remission from myeloid leukemia.

50. The method of claim 41, wherein the anti-cancer agent is PS341.

51. The method of claim 50, wherein the individual is in remission from myeloma.

52. The method of claim 41, wherein the anti-cancer agent is taxol.

53. The method of claim 52, wherein the individual is in remission from prostate cancer.

54. The method of claim 52, wherein the individual is in remission from breast cancer.

55. The method of claim 41, wherein the anti-cancer agent is adriamycin.

56. The method of claim 56, wherein the individual is in remission from breast cancer.

57. The method of claim 41, wherein the anti-cancer agent is 5-fluoroceracil.

58. The method of claim 57, wherein the individual is in remission from colon cancer.

59. The method of claim 41, wherein the anti-cancer agent is methotrexate.

60. The method of claim 59, wherein the individual is in remission from colon cancer.